## Author Index to Volume 48

Ahmad, A., see J.D. Canaday	48 (1991) 113
Ahmad, A., see P.G. Komorowski	48 (1991) 295
Angenault, J., see O. Tillement	48 (1991) 249
Antolini, E., see V. Berbenni	48 (1991) 101
Arai, H., see T. Inoue	48 (1991) 283
Argyropoulos, S.A., see P.G. Komorowski	48 (1991) 295
Balasubramanyan, D.R. and S.V. Bhat, Protonic conductivity of (NH <sub>4</sub> ) <sub>4</sub> Fe(CN) <sub>6</sub> ·1.5 H <sub>2</sub> O	
by complex admittance method	48 (1991) 271
Balkanski, M., see C. Julien	48 (1991) 225
Bandaranayake, P.W.S.K., see M.A.K.L. Dissanayake	48 (1991) 277
Berbenni, V., V. Massarotti, D. Capsoni, R. Riccardi, A. Marini and E. Antolini, Struc-	
tural and microsctructural study of the formation of the solid solution LixNi1-xO	48 (1991) 101
Bhat, S.V., see D.R. Balasubramanyan	48 (1991) 271
Boilot, J.P., see M. Smaihi	48 (1991) 213
Boivin, J.C., see T. Iharada	48 (1991) 257
Boukamp, B.A., see B.A. van Hassel	48 (1991) 139
Boukamp, B.A., see B.A. van Hassel	48 (1991) 155
Burggraaf, A.J., see B.A. van Hassel	48 (1991) 139
Burggraaf, A.J., see B.A. van Hassel	48 (1991) 155
Burkhard, D.J.M., B. Hanson and G.C. Ulmer, ZrO2 oxygen sensors: An evaluation of be-	
haviour at temperatures as low as 300°C. (Corrected version) Erratum	48 (1991) 331
Cai, Z., see C. Fang	48 (1991) 289
Canaday, J.D., S.F. Chehab, A.K. Kuriakose, A. Ahmad and T.A. Wheat, Protonic con-	
ductivity of Hyceram™, a bonded hydronium NASICON	48 (1991) 113
Canaday, J.D., see P.G. Komorowski	48 (1991) 295
Capsoni, D., see V. Berbenni	48 (1991) 101
Careem, M.A., see M.A.K.L. Dissanayake	48 (1991) 277
Chadrashekara, A., see V. Ravindrachary	48 (1991) 173
Chaput, F., see M. Smaihi	48 (1991) 213
Chehab, S.F., see J.D. Canaday	48 (1991) 113
Couturier, J.C., see O. Tillement	48 (1991) 249
Dissanayake, M.A.K.L., M.A. Careem, P.W.S.K. Bandaranayake and C.N. Wijayasekera,	
Ionic conductivity of solid solutions of α-Li <sub>2</sub> SO <sub>4</sub> with Li <sub>2</sub> WO <sub>4</sub> : Strong evidence for the	
paddle wheel mechanism of ion transport	48 (1991) 277
Eguchi, K., see T. Inoue	48 (1991) 283
El-Absy, M.A., see I.M. El-Naggar	48 (1991) 79

El-Naggar, I.M., E.I. Shabana and M.A. El-Absy, Mechanism of diffusion and ion trans-	
port of chloride ions on hydrous ceric oxide	48 (1991) 79
Estournes, C., see M. Menetrier	48 (1991) 325
Fang, C., H. Gao, Y. Ho, Z. Cai and Y. Zhang, Oxysulphide glasses - a new kind of lithium	
ion conductors	48 (1991) 289
Feng, L., see B. Wang	48 (1991) 203
Fouletier, J., see T. Iharada	48 (1991) 257
Fujitsu, S., H. Takayama and H. Yanagida, Silver ionic conduction depending on atmo-	
sphere in ZnO film	48 (1991) 309
Gao, H., see C. Fang	48 (1991) 289
Ghoneimy, H.F., see N.Z. Misak	48 (1991) 71
Gillot, B., M. Kharroubi, R. Metz and A. Rousset, Thermal stability, crystallographic and	
electrical properties in undoped and Ba-doped Cu-Ni manganite spinels	48 (1991) 93
Gopal, S., see V. Ravindrachary	48 (1991) 173
Gourbilleau, F., see M. Smaihi	48 (1991) 213
Grätzel, M., see J. Kiwi	48 (1991) 123
Gulens, J., see P.G. Komorowski	48 (1991) 295
Hammouche, A., see T. Iharada	48 (1991) 257
Hancock, R.G.V., see P.G. Komorowski	48 (1991) 295
Hanson, B., see D.J.M. Burkhard	48 (1991) 331
Hernán, L., M. Macías, J. Morales, L. Sánchez and J.L. Tirado, Lithium insertion into pyro-	40 (1001) 221
chlore WO <sub>3</sub>	48 (1991) 231
Ho, Y., see C. Fang	48 (1991) 289
Hojjaji, A., see M. Menetrier	48 (1991) 325
Hoshino, S., Review: Structure and dynamics of solid state ionics	48 (1991) 179
Iharada, T., A. Hammouche, J. Fouletier, M. Kleitz, J.C. Boivin and G. Mairesse, Elec-	
trochemical characterization of BIMEVOX oxide-ion conductors	48 (1991) 257
Inoue, T., N. Seki, J. Kamimae, K. Eguchi and H. Arai, The conduction mechanism and	
defect structure of acceptor- and donor-doped SrTiO <sub>3</sub>	48 (1991) 283
Ishigame, M., see H. Yugami	48 (1991) 321
Julien, C., T. Sekine and M. Balkanski, Lattice dynamics of lithium intercalated MoS <sub>2</sub>	48 (1991) 225
Kamimae, J., see T. Inoue	48 (1991) 283
Kashida, S., see K. Yamamoto	48 (1991) 241
Kharroubi, M., see B. Gillot	48 (1991) 93
Kiwi, J., K. Ravindranathan Thampi and M. Grätzel, Methane dimerization through ion	
conductors (β-Al <sub>2</sub> O <sub>3</sub> )	48 (1991) 123
Kleitz, M., see T. Iharada	48 (1991) 257
Komorowski, P.G., S.A. Argyropoulos, R.G.V. Hancock, J. Gulens, P. Taylor,	( ) 201
J.D. Canaday, A.K. Kuriakose, T.A. Wheat and A. Ahmad, Characterization of pro-	
tonically exchanged NASICON	48 (1991) 295
Kuo, C.K., see A. Tan	48 (1991) 85
and bearing out the and	40 (1771) 03

Kuo, C.K., A. Tan and P.S. Nicholson, Impedance analysis as a tool for designing β"-al-	
umina microstructures	48 (1991) 315
Kuriakose, A.K., see J.D. Canaday	48 (1991) 113
Kuriakose, A.K., see P.G. Komorowski	48 (1991) 295
Kuwabara, K., J. Nunome and K. Sugiyama, Rechargeability of solid-state copper cells uti-	
lizing cathodes of Prussian blue and Berlin green	48 (1991) 303
Levasseur, A., see M. Menetrier	48 (1991) 325
Lundén, A. and BE. Mellander, On the electrical conductivity and other transport prop-	
erties of molten sodium sulphate	48 (1991) 127
Lutz, H.D., A. Pfitzner and Ch. Wickel, Ionic conductivities of spinel-type quaternary lith-	
ium chlorides – phase diagrams of LiCl $-M^{I}$ Cl $-M^{II}$ Cl $_{2}$ ( $M^{I}$ = Cu, Na; $M^{II}$ = Mn, Cd, Mg)	48 (1991) 131
Macías, M., see L. Hernán	48 (1991) 231
Mairesse, G., see T. Iharada	48 (1991) 257
Marini, A., see V. Berbenni	48 (1991) 101
Massarotti, V., see V. Berbenni	48 (1991) 101
Mellander, BE., see A. Lundén	48 (1991) 127
Menetrier, M., A. Hojjaji, C. Estournes and A. Levasseur, Ionic conduction in the B <sub>2</sub> S <sub>3</sub> -	
Li <sub>2</sub> S glass system	48 (1991) 325
Metz, R., see B. Gillot	48 (1991) 93
Misak, N.Z., H.F. Ghoneimy, ES.I. Shabana and S.S. Shafik, Interdiffusion in alkali ion sorption by hydrous stannic oxide: Mechanism and effect of co-ion	48 (1991) 71
Miura, N., see Y. Teraoka	48 (1991) 207
Morales, J., see L. Hernán	48 (1991) 231
Morates, J., see L. Hernan	46 (1991) 231
Nicholson, P.S., see A. Tan	48 (1991) 85
Nicholson, P.S., see C.K. Kuo	48 (1991) 315
Nobunaga, T., see Y. Teraoka	48 (1991) 207
Nunome, J., see K. Kuwabara	48 (1991) 303
Okamoto, K., see Y. Teraoka	48 (1991) 207
Peng, X., see B. Wang	48 (1991) 203
Petit, D., see M. Smaihi	48 (1991) 213
Pfitzner, A., see H.D. Lutz	48 (1991) 131
Quarton, M., see O. Tillement	48 (1991) 249
Ravdel, B., see E.I. Toroshchina	48 (1991) 267
Ravindrachary, V., V. Sreeramalu, H.R. Sreepad, A. Chadrashekara and S. Gopal, Dop-	
pler broadened and ionic conductivity studies on NASICON analogue	48 (1991) 173
Ravindranathan Thampi, K., see J. Kiwi	48 (1991) 123
Riccardi, R., see V. Berbenni	48 (1991) 101
Rousset, A., see B. Gillot	48 (1991) 93
Sánchez, L., see L. Hernán	48 (1991) 231
Seki, N., see T. Inoue	48 (1991) 283

Sekine, T., see C. Julien	48 (1991) 225
Shabana, ES.I., see N.Z. Misak	48 (1991) 71
Shabana, E.I., see I.M. El-Naggar	48 (1991) 79
Shafik, S.S., see N.Z. Misak	48 (1991) 71
Smaihi, M., D. Petit, F. Gourbilleau, F. Chaput and J.P. Boilot, Sol-gel preparation and	
lithium dynamics in the Li <sub>4</sub> SiO <sub>4</sub> -Li <sub>3</sub> PO <sub>4</sub> solid solution	48 (1991) 213
Sreepad, H.R., see V. Ravindrachary	48 (1991) 173
Sreeramalu, V., see V. Ravindrachary	48 (1991) 173
Suemoto, T., see H. Yugami	48 (1991) 321
Sugiyama, K., see K. Kuwabara	48 (1991) 303
Takayama, H., see S. Fujitsu	48 (1991) 309
Tan, A., C.K. Kuo and P.S. Nicholson, A study of hydronium-exchange of polycrystalline	
K-Na β"/β-Al <sub>2</sub> O <sub>3</sub>	48 (1991) 85
Tan, A., see C.K. Kuo	48 (1991) 315
Taylor, P., see P.G. Komorowski	48 (1991) 295
Teraoka, Y., T. Nobunaga, K. Okamoto, N. Miura and N. Yamazoe, Influence of constit-	
uent metal cations in substituted LaCoO3 on mixed conductivity and oxygen permeability	48 (1991) 207
Tikhonov, K.I., see E.I. Toroshchina	48 (1991) 267
Tillement, O., J.C. Couturier, J. Angenault and M. Quarton, Crystal chemistry and elec-	
trical study of Na <sub>x</sub> NbTi(PO <sub>4</sub> ) <sub>3</sub>	48 (1991) 249
Tirado, J.L., see L. Hernán	48 (1991) 231
Toroshchina, E.I., B. Ravdel and K.I. Tikhonov, On the phase transitions and phase com- position in cathode reduction of 2H-niobium diselenide	48 (1991) 267
Trigunayat, G.C., A survey of the phenomenon of polytypism in crystals	48 (1991) 3
Ulmer, G.C., see D.J.M. Burkhard	48 (1991) 331
Van Hassel, B.A., B.A. Boukamp and A.J. Burggraaf, Electrode polarization at the Au,O <sub>2</sub> (g)/yttria stabilized zirconia interface. Part I: Theoretical considerations of reaction model	48 (1991) 139
Van Hassel, B.A., B.A. Boukamp and A.J. Burggraaf, Electrode polarization at the	10 (1771) 137
Au,O <sub>2</sub> (g)/yttria stabilized zirconia interface. Part II: Electrochemical measurements	
and analysis	48 (1991) 155
Wang, B., L. Feng and X. Peng, The impedance study of modified PEO polymer electrolyte	48 (1991) 203
Wheat, T.A., see J.D. Canaday	48 (1991) 113
Wheat, T.A., see P.G. Komorowski	48 (1991) 295
Wickel, Ch., see H.D. Lutz	48 (1991) 131
Wijayasekera, C.N., see M.A.K.L. Dissanayake	48 (1991) 277
Yamamoto, K. and S. Kashida, X-ray study of the cation distribution in Cu <sub>2</sub> Se, Cu <sub>1.8</sub> Se	
and Cu <sub>1.8</sub> S; analysis by the maximum entropy method	48 (1991) 241
Yamazoe, N., see Y. Teraoka	48 (1991) 207
Yanagida, H., see S. Fujitsu	48 (1991) 309
Yugami, H., T. Suemoto and M. Ishigame, Fluorescence line narrowing study of Eu <sup>3+</sup> in YSZ: A new direction of research in superionic materials	48 (1991) 321
. See new another or resourch in superiority materials	(1271) 001
Zhang, Y., see C. Fang	48 (1991) 289

## Subject Index to Volume 48

Ammonium iron cyanide, 271 Anionic conductivity, 207, 257

β"-alumina, 315 Berlin green, 303 Bismuth based electrolytes, 257 Boron sulphide, 325

Cadmium iodide, 3
Cathode material, 303
Ceramic membranes, 207
Cerium oxide, 79
Chloride diffusion, 79
Complex impedance, 271
Conductivity mechanism, 113
Copper selenide, 241
Copper sulfide, 241

Doppler broadening, 173 Dynamics, 179

Electrical conductivity, 127 Electrochemical characterization, 257 Electrode polarization, 139, 155 Electrode reaction model, 139, 155

Fluorescence line narrowing, 321

Glass transition temperature, 325

Hydronium exchange, 85

Impedance, 113
analysis, 315
spectroscopy, 139, 155
Intercalation, 225, 231, 249, 267
Interdiffusion, 71
Ion exchange, 71, 79
Ionic conductivity, 173
hydronium, 295
lithium, 131, 203, 277, 289
proton, 113, 271
silver, 309
Ionic diffusion, 179

Layered compounds, 3 Lithium halides, 131 Lithium phosphate, 213 Lithium silicate, 213 Lithium sulphate, 277

MAS-NMR, 213 Methane dimerization, 123 Microstructure, 315 Mixed conductivity, 207, 257 Molten salts, 127 Molybdenum disulfide, 225

NASICON, 173, 249, 295 Neutron activation analysis, 295 Neutron diffraction, 179 Nickel oxide, 101 Niobium diselenide, 267 Niobium phosphate, 249

Oxygen electrode, 139, 155 Oxygen permeability, 207 Oxysulphide glasses, 289

Paddle-wheel mechanism, 277 Perovskite, 283 Perovskite-type oxides, 207 Polyethylene oxide, 203 Polymer, 203 Polytype growth, 3 Polytypism, 3 Prussian blue, 303 Pyrochlore, 231

Seebeck coefficient, 93 effect, 283 SEM, 101 Silicon carbide, 3 SIMS, 309 Sodium sulphate, 127 Sol-gel synthesis, 213 Solid electrolyte, 303 Solid state cell, 303 phase, 3 transformation, 3 Spinel, 93, 131 Stacking faults, 3 Strontium titanate, 283 Structure, 179

Substitution, 207

Theory, 225
Thermal stability, 93
Thermodynamics, 101, 267
Tin oxide, 71
Tin sulphide, 3
Titanium phosphate, 249
Transport number, 127, 309
Tungsten trioxide, 231

Subject index

X-ray, 101 single crystal, 241 X-ray diffraction, 3

Yttria-stabilized zirconia, 139, 155, 321

Zinc oxide, 309

